

## **II. RESPONSE TO OFFICE ACTION**

### **A. Status of the Claims**

Claims 46-97 were pending at the time of the Action, claims 1-45 having been previously canceled in the Preliminary Amendment filed July 27, 2004. Claims 46-53, 55, 56 and 67-97 stand rejected. Claims 54 and 57-66 are objected to. Claim 47 has been canceled, and claims 46-97 have been amended in the Amendment contained herein. New claim 98 has been added by amendment. No new matter is added by the amendments or the new claim. Therefore, claims 46 and 48-98 are pending after entry of the Amendment.

### **B. The Claim Informalities Have Been Rectified**

The claim dependencies have been corrected wherein the pending claims no longer depend on canceled claims. In addition, where claims recited both a broad and narrow range, the narrow ranges have been deleted. Applicants believe that these changes render moot the objections.

### **C. Rejections under 35 USC § 103, First Paragraph**

#### ***1. The standard for establishing a prima facie case of obviousness.***

It is well settled that “[t]he examiner bears the initial burden of factually supporting any *prima facie* case of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under *no* obligation to submit evidence of nonobviousness.” *Manual of Patent Examining Procedure* (M.P.E.P.) § 2142 (8th Ed. Inc. Rev. No. 1) (emphasis added).

To establish a *prima facie* case of obviousness, the Action must show: (1) some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) a reasonable expectation of success; and (3) the prior art reference teaches or

suggests all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, (Fed Cir. 1991). With respect to element (1), “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” M.P.E.P. at § 2143.01. If any one of the three elements is missing, an obviousness rejection cannot be maintained.

**2. The rejection over *Laurent et al.* in view of *Lim et al.* is improper.**

Claims 46-53, 55-56, 67-71, 78-79 and 82-95 stand rejected under 35 U.S.C. § 103 as being obvious over *Laurent et al.* (US 2002/0046431 A1) in view of *Lim et al.* (US 6,461,391 B1). The Action states that *Laurent et al.* teaches the elements of the rejected claims except for reciting cationic tertiary para-phenylenediamine compounds as oxidation bases, and that *Lim et al.* teaches tertiary para-phenylenediamine compounds having all the limitations of claimed formula (I). The Action alleges that it would have been obvious for one of skill in the art to modify the teachings of *Laurent et al.* by using the oxidation bases of *Lim et al.*, motivation being provided by the compounds of *Lim et al.*, being “suitable primary intermediates for hair coloring compositions for providing good oxidative coloration of hair such as light fastness, fastness to shampooing, fastness to permanent wave treatment and suitable for providing a wide variety of different color shades with primary intermediate and coupler compounds.” Applicants traverse.

**a. *Laurent et al.* does not teach the opacifiers as claimed in the instant application.**

*Laurent et al.* recites the use of opacifiers generically with no further disclosure than the term itself. The rejected claims have the limitation of “least one pearlescent or opacifying agent chosen from coated or uncoated titanium oxides, mica-titaniums and micas.” The Action is silent as to how the recitation of the genus in *Laurent et al.* teaches the specific opacifiers in the

claimed Markush group. In addition, the Action on page 5 acknowledges that Laurent *et al.* does not teach particular opacifiers, such as uncoated titanium oxide in powdered form in claim 72 or the opacifiers in the Markush groups in claims 96 and 97, which is the **exact** same Markush group as in the instant rejected claims. As a genus does not necessarily teach a species or sub-genus, the Action must provide particular findings as to why the recitation of the term “opacifiers” teaches the use of the specific opacifiers in the Markush group as claimed. The Action is silent on this point. As the examiner bears the initial burden of factually supporting any *prima facie* case of obviousness, the lack of any findings on this issue plus the internal inconsistencies as between the same limitation in different claims, a *prima facie* case of obviousness plainly cannot have been established due to this issue alone.

***b. There is no motivation to combine the teachings of Laurent et al. with the teachings of Lim et al.***

When obviousness is based on the teachings of multiple prior art references, the Action must establish some “suggestion, teaching, or motivation” that would have led a person of ordinary skill in the art to combine the relevant prior art teachings in the manner claimed. See *Tech Air, Inc. v. Denso Mfg, Mich, Inc.*, 192 F.3d 1353, 1358-60 (Fed. Cir. 1999); *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1572 (Fed. Cir. 1996). The reason, suggestion or motivation to combine prior art references must be based explicitly or implicitly: 1) in the prior art references themselves; 2) in the knowledge of those of ordinary skill in the art that certain references, or disclosures in those references, are of special interest or importance in the field; or 3) from the nature of the problem to be solved, “leading inventors to look to references relating to possible solutions to that problem.” *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 665 (Fed. Cir. 2000). As stated by the Federal Circuit, “Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis

is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.” *Dembiczak*, 175 F.3d at 999; *see also Ruiz* 234 F.3d at 665 (explaining that the temptation to engage in impermissible hindsight is especially strong with seemingly simple mechanical inventions). This is because “[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint of piecing together the prior art to defeat patentability – the essence of hindsight.” *Dembiczak*, 175 F.3d at 999. Thus, it has been consistently held that a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but some motivation to combine the prior art teaching in the particular manner claimed. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000) Thus, “particular finding must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.” *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000), emphasis added. “In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with the knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.” *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (emphasis added).

The references do not supply a reason, suggestion, or motivation to combine *Laurent et al.* and *Lim et al.* As stated in M.P.E.P. § 2143.01: “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” The motivation to combine the references proffered by the Action is based on the Action’s statement that *Lim et al.* discloses that its quaternary oxidation bases are suitable for the claimed utility. This is insufficient to provide motivation under the law.

The Action states that Laurent *et al.* “teaches a hair dyeing composition comprising oxidation bases such as para-phenylenediamine compounds represented by a formula (1).” However, Laurent *et al.* teaches a specific dyeing composition directed to slowing the development of the oxidizing agent, requiring a composition comprising a combination of either an oxyalkylated fatty alcohol or a glycerolated fatty alcohol and a hydroxylated solvent in addition to an oxidative dye and a cationic amphiphilic polymer comprising at least one fatty acid. Laurent *et al.* broadly discloses suitable oxidant dyes, such that “representative oxidation dyes include ortho-phenylenediamines, para-phenylenediamines, double bases, ortho-aminophenols, para-aminophenols, heterocyclic bases and their acid addition salts” (paragraph 0264). The para-phenylenediamines are themselves broadly disclosed in a generic formula, wherein the thousands of potential structures include, once the “R” groups have been suitably parsed, pyrrolidine derivatives. Lim *et al.* discloses “useful hair coloring systems [that] comprise quaternized pyrrolidone compounds” (Abstract). Why replace the generically disclosed pyrrolidine containing bases of Laurent *et al.* with the quaternized bases of Lim *et al.*? **Nothing** in either reference provides a motivation or suggestion of the **particular** desirability to modify the **specific** compositions of Laurent *et al.* directed to slowing the rate color formation with the **particular** quaternized dyes of Lim *et al.*, as opposed to any other possible oxidant base.

Further, the nature of the problem to be solved does not supply a reason, suggestion or motivation to combine the references. A reason, suggestion or motivation has been found in the nature of the problem to be solved when two prior art references address the precise problem that the patentee was trying to solve. This is not the case. Laurent *et al.* was trying to slow down the oxidation reaction (see paragraph [0016], page 1) and Lim *et al.* was looking for oxidation bases with relatively weak sensitizers. The instant application improves chromatic, fastness, selectivity

and intensity properties of cationic quaternary para-phenylenediamines oxidation bases (page 3, lines 12 – 35). Finally, there is no evidence that the knowledge of those of ordinary skill in the art would supply a reason, suggestion or motivation to combine Laurent *et al.* and Lim *et al.*

The Action has not provided any particular findings to support an explicit or implicit reason, suggestion or motivation to combine Laurent *et al.* and Lim *et al.* in: 1) the prior art references themselves; 2) the knowledge of those of ordinary skill in the art that certain references are of special interest or importance in the field; or 3) the nature of the problem to be solved. The Action has **only** shown that the references can be combined, a standard specifically repudiated by the M.P.E.P. Applicants respectfully assert that the Action has not met the evidentiary burden, as required by current case law, to proffer particular findings as to why a skilled artisan, confronted with the same problems as the inventors and no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.

***c. Request for reconsideration***

In light of the foregoing, Applicants respectfully request that the rejection of claims 46-53, 55-56, 67-71, 78-79 and 82-95 as being obvious over Laurent *et al.* in view of Lim *et al.* be reconsidered and withdrawn.

***2. The rejection over Laurent et al. in view of Lim et al. and further in view of Murakami is improper.***

Claims 72-77 stand rejected under 35 USC § 103 as being obvious over Laurent *et al.* (US 2002/0046431 A1) in view of Lim *et al.* (US 6,461,391 B1) and further in view of Murakami (US 2003/0145395 B1). The disclosure of Lim *et al.* and Laurent *et al.* are stated to be as in the previous obviousness rejection. The Action acknowledges that Lim *et al.* and Laurent *et al.* do not teach or disclose the specific species of the opacifying agents as claimed.

Murakami is stated to teach compositions comprising opacifying agents with the limitations as claimed. The Action alleges that as Murakami teaches that “the titanium oxide (opacifying agent) is used in the dyeing composition for improving the performance of the dyeing composition so the composition will have the appearance and make it acceptable as a hairdressing product to consumers (see page 5, paragraph 0075), and, thus, a person of ordinary skill in the art would be motivated to incorporate titanium oxide as taught by Murakami in the composition of Laurent *et al.*, for improving the performance of the dyeing composition and would expect such a composition to have similar properties to those claimed... .” Applicants respectfully traverse.

***a. Murakami (US 2003/0145395 A1) is not prior art.***

Murakami is an application nationalized under 35 USC § 371 from PCT/JP02/04290, filed April 26, 2002, and published in Japanese as WO 02/087529. As described in M.P.E.P. § 706.02(f)(1) Example 5, a published application that is the national stage of a PCT application filed after November 29, 2000, and which was not published in English, has no 35 U.S.C. § 102(e)(1) date, nor would an issued patent have a 135 U.S.C. § 102(e)(2) date. Thus, the effective date of Murakami as art is the publication date, August 7, 2003. This is after the December 13, 2002, foreign application priority date of the instant application, and also after the February 4, 2003, priority US provisional application date, both of which disclose the invention in its entirety. Thus, Murakami is not available as prior art against the instant invention. However, as discussed below, even if the subject matter was citable as prior art, it would not render the invention unpatentable as discussed below.

- b. If Murakami was prior art, there would be no motivation to combine the teachings of Murakami with the teachings of Laurent et al. and the teachings of Lim et al.*

Murakami discloses titanium oxide as a species of inorganic white colorants, such that the “inorganic white colorant is at least one member selected from the group consisting of titanium oxide, zinc white, zinc sulfide, lithopone, white lead, antimony white and zirconia.” (see e.g., page 3, paragraph [0047]). The invention of Murakami is directed at dyeing compositions comprising a natural dye and an inorganic white colorant that overcomes the stated disadvantages of using compositions comprising oxidant dyes, such as the need to rinse out oxidant dyes and potential skin irritation (page 1, paragraph [0003]). The inorganic white colorant is used because it “inhibits or eliminates the pronounced coloration of the dyeing hairdressing composition caused by the [. . .] natural pigment” (page 5, paragraph [0075]). This has absolutely nothing to do with the compositions and methods of Laurent *et al.* directed at slowing down the development of oxidant dyes. In fact, Murakami actually **teaches away** from using oxidant dyes. The Action’s statement ascribing the source of motivation as Murakami’s teaching that “the titanium oxide (opacifying agent) is used in the dyeing composition for improving the performance of the dying composition so the composition will have the appearance and make it acceptable as a hairdressing product to consumers (see page 5, paragraph 0075)” totally mischaracterizes the meaning of the reference when read in context. The Action leaves out the fact that the composition in question specifically uses a natural dye as **opposed** to an oxidant dye. No motivation is supplied to modify the teaching of Laurent *et al.* by this statement when considered in context. Also, the Action is silent as to why, in view of the list of inorganic white colorants recited by Murakami, one of skill in the art would have been specifically motivated to select titanium oxide for use as an opacifier (a term that is not even used in Murakami). Nor is a motivation supplied as to why one of skill in the art would modify



Laurent *et al.* in such a way as to provide the elements of the present invention, wherein the opacifier is not an optional extra component but a required component of dyeing compositions comprising specific oxidant bases. The Action should have provided particular findings to establish the motivation to account for this series of events. However, it appears from the lack of such particular findings, that the references have been cobbled together, with the selection of references apparently being based solely because they recite an appropriate element. Such is the hallmark of the impermissible use of hindsight reconstruction. Applicants respectfully assert that, assuming the subject matter of Murakami was properly cited as a reference, the current Action does not establish a *prima facie* case of obviousness.

*e. Request for reconsideration and withdrawal of rejections.*

In light of the foregoing, Applicants request that the rejection of claims 72-77 as being obvious over Laurent *et al.* in view of Lim *et al.* and further in view of Murakami be reconsidered and withdrawn.

**D. The Objections to Claims 54 and 57-66 are Moot**

Claims 54 and 57-66 are objected to, while being otherwise allowable, as depending upon a rejected base claim. These objections are rendered moot because the base claims from which these claims depend are allowable for the reasons set forth above.

Applicants have added new claim 98 that incorporates formula (III) and (IV) as limitations as well as formula (II), wherein formula (II) is limited by a proviso such that R<sub>4</sub> cannot be an alkyl group when the linker D is a covalent bond. Applicants believe that this renders the cationic tertiary para-phenylenediamine compounds of formula (I) distinct from those disclosed by Lim *et al.* and that claim 98 is allowable independent of the above arguments.

**E. Conclusion**

Applicants believe that the present document is a full and complete response to the Office Action dated November 17, 2004. The present case is in condition for allowance, and such favorable action is respectfully requested.